

Abstract Submitted  
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**Supersymmetry, the Casimir effect and speculative propulsion**

RICHARD OBOUSY, GERALD CLEAVER, Baylor University — Within the framework of brane-world models it is possible to account for the cosmological constant by assuming supersymmetry is broken on the 3-brane but preserved in the bulk. An effective Casimir energy is induced on the brane due to the boundary conditions imposed on the compactified extra dimensions. It will be demonstrated that modification of these boundary conditions allows a spacecraft to travel at any desired speed due to a local adjustment of the cosmological constant which effectively contracts/expands space-time in the front/rear of the ship resulting in motion potentially faster than the speed of light as seen by observers outside the disturbance.

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